

# Impact of COVID-19 pandemic in the ReLink-C strategy to search and retrieve lost-to follow-up HCV patients

Elena Vargas-Accarino<sup>1</sup>; Joan Martínez-Campraciós<sup>1,2</sup>; Raquel Domínguez-Hernández<sup>3</sup>; Ariadna Rando-Segura<sup>4,5</sup>; Mar Riveiro-Barciela<sup>1,6</sup>; Francisco Rodríguez-Frías<sup>6,7,8</sup>; Ana Barreira<sup>1</sup>; Adriana Palom<sup>1</sup>; Miguel Ángel Casado<sup>3</sup>; Rafael Esteban<sup>1,6</sup>; Maria Buti<sup>1,6</sup>

<sup>1</sup> Liver Unit, Internal Medicine Department, Hospital Universitari Vall d'Hebron, Barcelona, Spain; <sup>2</sup> Medicine Department, Universitat Autònoma de Barcelona, Bellaterra, Spain; <sup>3</sup> Pharmacoeconomics & Outcomes Research Iberia (PORIB), Madrid, Spain; <sup>4</sup> Department of Microbiology, Hospital Universitari Vall d'Hebron, Barcelona, Spain; <sup>5</sup> Department of Microbiology, Universitat Autònoma de Barcelona, Bellaterra, Spain; <sup>6</sup> CIBERehd, Instituto Carlos III, Barcelona, Spain; <sup>7</sup> Biochemistry Department, Clinical Laboratories Hospital Universitari Vall d'Hebron, Barcelona, Spain; <sup>8</sup> Liver Pathology Unit, Biochemistry and Microbiology Departments, Hospital Universitari Vall d'Hebron, Barcelona, Spain

## BACKGROUND

There are patients with Hepatitis C Virus (HCV) previously diagnosed and lost to follow-up (LTFU) in the health system. COVID-19 pandemic makes it necessary to intensify strategies to identify and linkage to care to achieve HCV elimination [1,2].

## OBJETIVE

To evaluate the impact of COVID-19 pandemic on LTFU patients in searching and retrieving HCV-RNA positive individuals susceptible to treatment (ReLink-C strategy) and perform a health economic evaluation.

## METHODS

### Search and retrieval

Figure 1. Model of the ReLink-C strategy



HCV, Hepatitis C virus; LTFU, lost-to-follow-up; DAA, direct-acting antiviral. \*In microbiology databases of Barcelona north area (450,000 inhabitants) in two periods (pre-COVID-19, 01/2019 to 02/2020 and COVID-19, 03/2020 to 12/2020). \*\* HCV-RNA determination, assessment of fibrosis, HBV and HIV screening.

### Economic evaluation

- The cost of ReLink-C strategy included costs related to the hours of search and retrieval [3] and healthcare resources cost for HCV linkage-to-care and diagnosis [4].
- Markov model previously published [5] was used to estimate lifetime health and economic outcomes of ReLink-C strategy compared with non-intervention including only direct cost relative disease management. The target population was all candidates to HCV therapy with available contact information. The results showed number of liver complications avoided, as well as the costs associated with their management.

## CONCLUSION

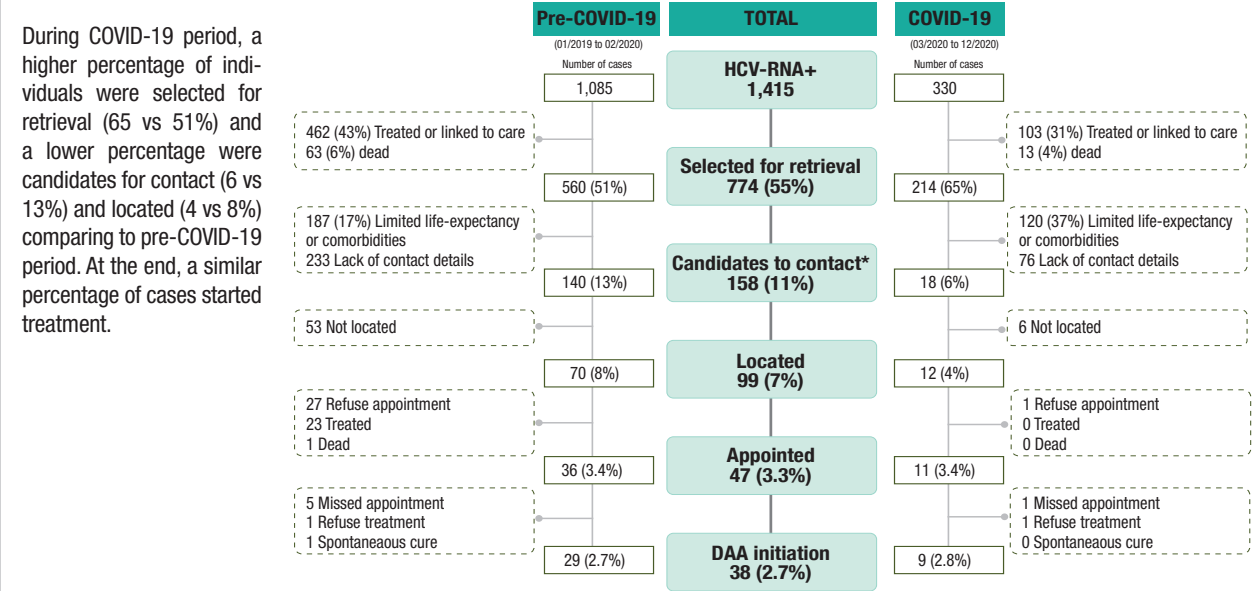
ReLink-C strategy retrieved and treated a high number of LTFU patients and was cost-effective. COVID-19 decreased the linkage to care and treatment of HCV patients.

## References

[1] Strategic plan for tackling hepatitis C in the Spanish national health system. Available from: <https://www.mscbs.gob.es/>; [2] Buti M et al. J Hepatol. 2021; [3] Informe de salarios médicos: España. Medscape 2018. Available from: <https://espanol.medscape.com>; [4] Official prices of the Catalan Institute of Health; [5] Turnes J et al. Gastroenterol Hepatol. 2017

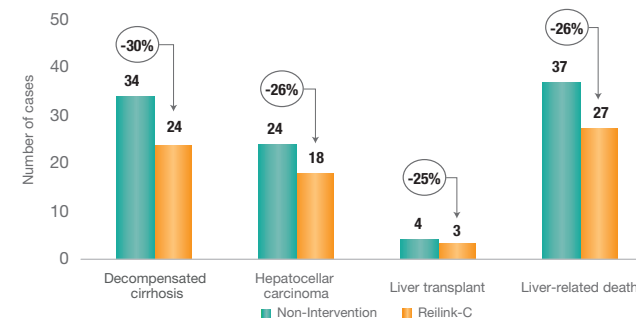
## RESULTS

Figure 2. Flowchart of ReLink-C strategy for the total period and comparison of pre-COVID-19 and COVID-19 periods



During COVID-19 period, a higher percentage of individuals were selected for retrieval (65 vs 51%) and a lower percentage were candidates for contact (6 vs 13%) and located (4 vs 8%) comparing to pre-COVID-19 period. At the end, a similar percentage of cases started treatment.

Figure 3. Number of cases of liver complications and mortality projected lifetime



- The investment associated to ReLink-C strategy was €23,830 (€5,496 to 210 hours/search and €18,334 to diagnosis).
- In the Markov model 133 RNA-HCV positive patients were included (158 candidates to contact, excluding 23 treated, 1 death and 1 spontaneous cure). ReLink-C strategy showed that treating 38 patients with DAAs vs no treated in non-intervention avoided liver complications (Figure 3), saving €423,372 associated to their management (-€69,922 DC; -€92,341 HCC; -€261,109 LT and post-LT) and deaths were reduced by 26%.